Attorney Docket No. 5051-574CT PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Martin et al.
Serial No.: 10/802,644
Filed: March 17, 2004
For: *Blocking Peptide for Inflammatory Cell Secretion*

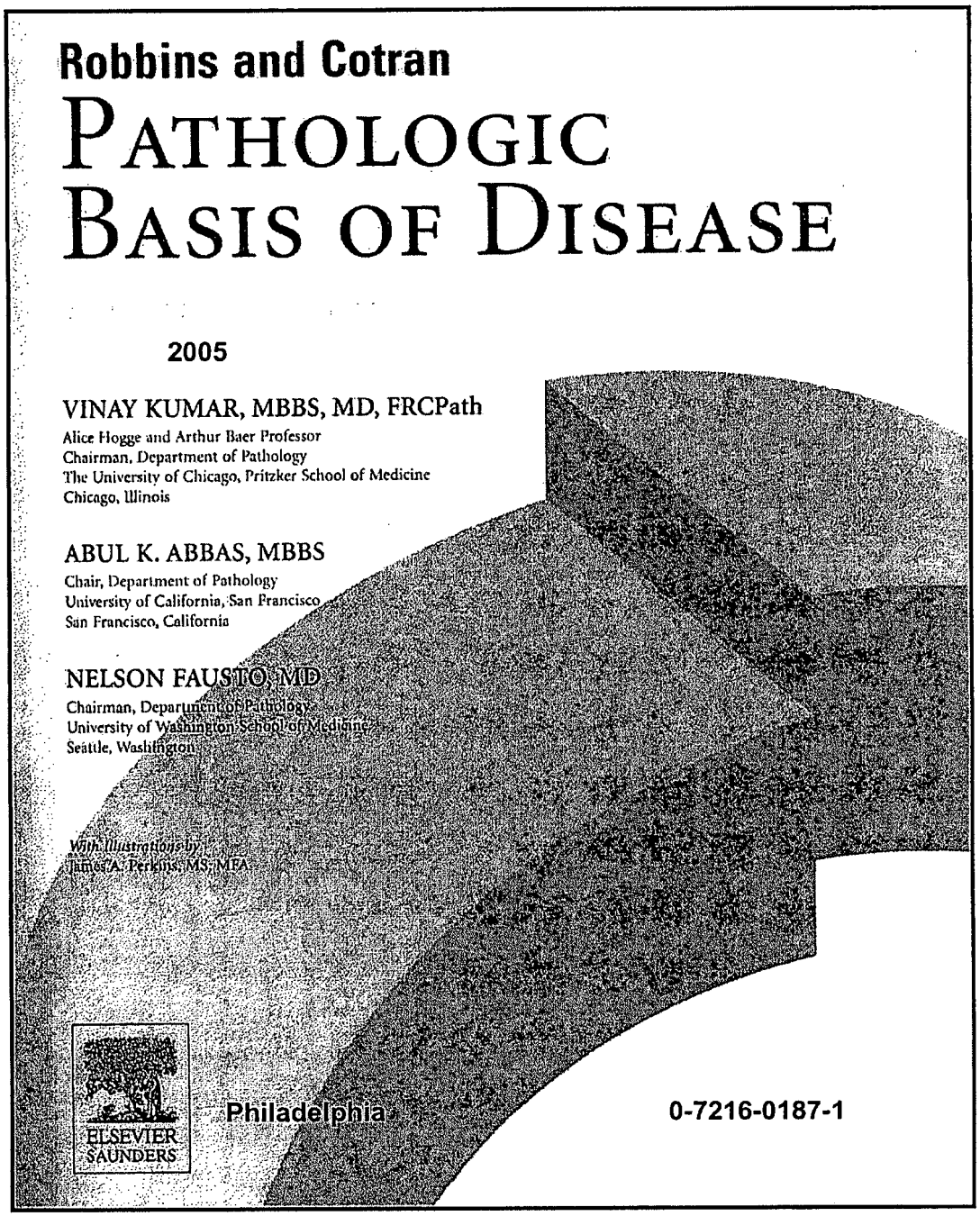
Confirmation No.: 3963
Art Unit: 1644
Examiner: Haddad

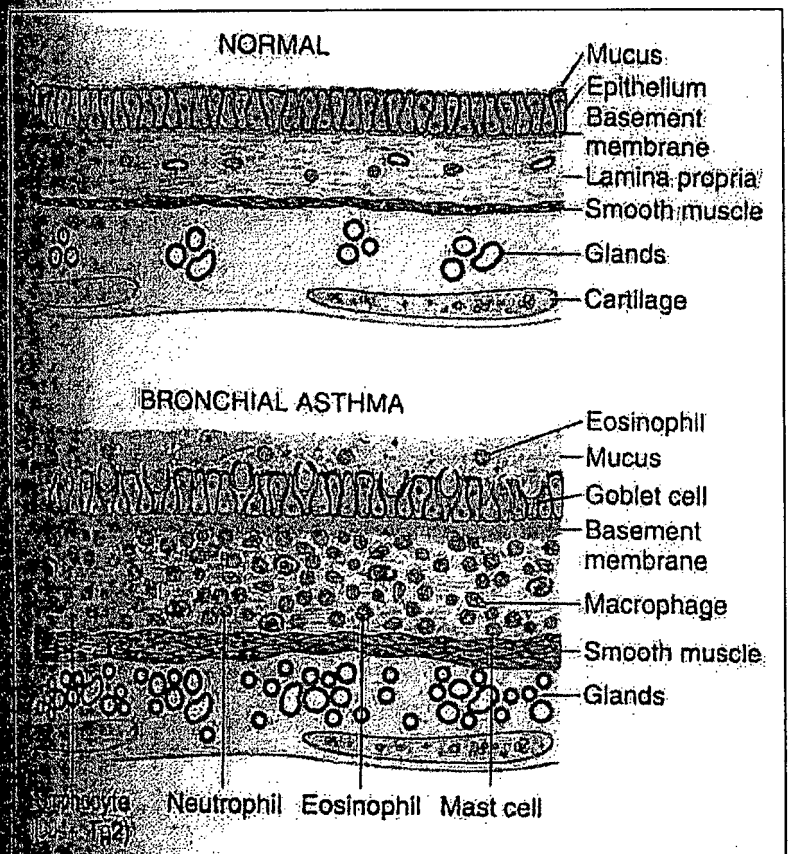
Date: July 11, 2006

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attachment E

Robbins and Cotran (2005), Pathologic Basis of Disease, cover and page 727.





...URE 15-12 Comparison of a normal bronchiole with that in ...tient with asthma. Note the accumulation of mucus in the ...chial lumen resulting from an increase in the number of ...-secreting goblet cells in the mucosa and hypertrophy of ...mucosal mucus glands. In addition, there is intense chronic ...mation due to recruitment of eosinophils, macrophages, ...r inflammatory cells. Basement membrane underlying ...mucosal epithelium is thickened, and there is hypertrophy ...hyperplasia of smooth muscle cells.

- *Postinfectious conditions*, including necrotizing pneumonia caused by bacteria (*Mycobacterium tuberculosis*, *Staphylococcus aureus*, *Haemophilus influenzae*, *Pseudomonas*), viruses (adenovirus, influenza virus, HIV), and fungi (*Aspergillus* species)
- *Bronchial obstruction*, owing to tumor, foreign bodies, and occasionally mucus impaction, in which the bronchiectasis is localized to the obstructed lung segment
- Other conditions, including rheumatoid arthritis, systemic lupus erythematosus, inflammatory bowel disease, and post-transplantation (chronic lung rejection, and chronic graft-versus-host disease after bone marrow transplantation)

Etiology and Pathogenesis. *Obstruction* and *infection* are the major influences associated with bronchiectasis, and it is likely that both are necessary for the development of full-fledged lesions, although either may come first. After bronchial obstruction (e.g., by mucus impaction, tumors, or foreign bodies), normal clearing mechanisms are impaired, there is pooling of secretions distal to the obstruction, and there is inflammation of the airway. Conversely, severe infections of the bronchi lead to inflammation, often with necrosis, fibrosis, and eventually dilatation of airways.

These mechanisms—infection and obstruction—are most readily apparent in the severe form of bronchiectasis associated with cystic fibrosis (Chapter 10). In this disorder, the primary defect in chloride transport leads to impaired secretion of chloride ions into mucus, low sodium and water content, defective mucociliary action, and accumulation of thick viscid secretions that obstruct the airways. This leads to